Initiative Name

<u>Enterprise Configuration Management Implementation</u> – CIO#15.2

Contact Information

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Strategic Plan Information

Initiative Type (Operations, Enhancement, Modernization): Operations	
FSA Priority (Number): Baseline Operations	**Total $ Amount Requested: $160,000**

FSA Proposed Business Justification

1. **Please indicate a general description of the initiative and related scope of work:**

Configuration Management (CM) is the process of establishing and maintaining the integrity of application(s) throughout their life cycle, by systematically identifying, controlling, and accounting for all changes made to an application and its documentation. This initiative will begin to institutionalize FSA's Enterprise Configuration Management Program. The full deployment and institutionalization of Enterprise Configuration Management is an integral part of the Solution Life Cycle (SLC), which supports the alignment of the additional related components including Enterprise Release Management (ERM) and Enterprise Change Management (ECM). All of these components, SLC, ERM, ECM and CM will be primarily supported by the Rational software suite of tools.

This initiative has the following goals:
1. Extend the FSA CM Coaching and Review Program (of all of FSA's CM Standards) to all application teams
2. Ensure that Production Readiness review Documentation is stored in the FSA PRR Documentation Enterprise Repository
3. Determine recommendations (for eventual 'Phase II' Go/No Go decision) for implementing an enterprise-wide CM Capability to track all of FSA's enterprise-level Configuration Items (I.E. Software, Hardware and OS Version).
4. Integrate the Rational ClearCase application with the Integrated Technical Architecture (ITA) team

Initiatives:
1. **Extend the FSA CM Coaching and Review Program to all Application Teams**
   o Determine roles and responsibilities for FSA CM Coaches and Reviewers
   o Transition responsibility for CM Coaching and Review Program to FSA CIO
   o Roll-out CM Coaching and Review program to FSA Application Teams not among the 13 teams already participating
   o Provide Reports to FSA Project Management on CM compliance among application teams

2. **Ensure that Production Readiness review Documentation is stored in the FSA PRR Documentation Enterprise Repository**
   o Determine roles and responsibilities for FSA PRR Documentation Lead
   o Transition responsibility for FSA PRR Documentation activities
   o Roll-out PRR Documentation Repository standards and guidelines to all application teams
   o
3. **Evaluation alternatives and provide recommendation for implementing an enterprise-wide CM Capability based on the FSA Infrastructure Blueprint (TIB) to track all of FSA's enterprise-level Configuration**
   o Develop high-level requirements for Solution similar to the proposed FSA 'Popkin Tool'
   o Determine integration points with other Enterprise CM components
   o Provide FSA decision-makers with data needed for cost/benefit analyses to be performed in support of Phase II Go/No go decisions

4. **Integrate the Rational ClearCase application with the Integrated Technical Architecture (ITA) team to provide application teams the option of utilizing ClearCase tool to configuration manage their development efforts as they move from development, to test, to stage, to production.**
   o Develop high level requirements for ClearCase Solution
   o Develop process and procedures for moving application through the lifecycle
   o Develop process and procedures for packaging several application into an overall release
   o Tool development and design will be managed and funded under initiative 15.5.

2. What business problem or opportunity is this initiative intended to address and what are the benefits?

Initiatives:

1. **Extend the FSA CM Coaching and Review Program to all application teams**

   Problem: Application Teams that perform development or maintenance activities without adhering to clearly-defined, repeatable CM processes can cause system outages, testing failures and costly rework and delivery delays. Some application teams at FSA are doing an excellent job of adhering to FSA standards and guidelines and some are not. Without teaching the application teams about the existing FSA CM Standards and then reviewing their compliance, there is no way to ensure that teams will take the necessary steps to ensure that development and production activities are governed by required CM guidelines.

   Benefits:
   – Each application team will have a CM Coach to advise team of FSA's standards regarding Application CM practices
   – FSA Coaches perform regular reviews (monthly) with application teams to review and report on each teams' CM compliance
   – Regular monthly compliance reports will be provided to FSA Project Management
   – Application teams likely to avoid costly rework by staying committed to required FSA CM practices

2. **Ensure that Production Readiness review Documentation is stored in the FSA PRR Documentation Enterprise Repository**

   Problem: FSA application teams progress through the PRR process, often without depositing all of the critical 'PRR Documentation' in a central repository.

   Benefits:
   – Ensures proper storage and availability of applications' critical PRR documentation
   – Allows for easier transition to support organization upon move to production
   – Provides available building blocks for future releases

3. **Evaluation alternatives and provide recommendation for implementing an enterprise-wide CM Capability based on the FSA Infrastructure Blueprint (TIB) to track all of FSA's enterprise-level Configuration**

   Problem: FSA does not have a central repository (similar to the 'Popkin Tool Solution') to track all configuration items (software, hardware and OS Versions etc.) needed to evaluate enterprise impacts. Therefore, changes made on behalf of one application may negatively affect another that shares a common infrastructure component or software.

   Benefits:
   – Evaluation of alternatives will provide FSA critical information to make an informed decision on whether or not to pursue the development of an enterprise ECM tool.
   – If developed, the solution will allow FSA to baseline its current enterprise configuration and start to systematically control change to the FSA portfolio.
   – If developed, the solution will allow real impact of change activity across the enterprise.
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4. **Integrate the Rational ClearCase application with the Integrated Technical Archetecture (ITA) team to provide application teams the option of utilizing ClearCase tool to configuration manage their development efforts as they move from development, to test, to stage, to production.**

   Problem: FSA does not a have a fully-integrated central code repository to track all development, test, staging and production code migration and critical documentation changes. Therefore, it is not possible for FSA to provide a baseline of existing code in a given environment.

   Benefits:
   • Provides a FSA standard for configuration management in the ITA environment
   • Provides a test-bed for moving code through the development lifecycle
   • Promotes long-term goals of moving releases into a staging environment to conduct integration testing

3. What core business area does this initiative address?

This initiative affects all hardware and software installations, application maintenance, emergency fixes, major releases, and system upgrades across the enterprise.

4. What action items are addressed by this initiative?

This initiative addresses Action Item CIO#15.2 – Enterprise Configuration Management.

5. How does this initiative contribute to achieving a clean audit?

The PRR Enterprise Repository's availability will allow key documentation associated with all FSA Applications to be located and produced in response to requests during an audit. Organizations without CM standards and practices may be unable to provide key historical information to auditors.

Additionally, the primary purpose of FSA's CM Coaching & Review program is to identify any non-compliance issues internally so that the issues can be resolved prior to an audit.

6. How does this initiative contribute to reducing high-risk status?

The CM program contributes to the reduction of high-risk status by providing the process, procedures, training and governance oversight for all configuration management activity, increasing consistency and stability among Application Teams' activities.

7. What objectives and strategies are supported by this initiative? (Please "x" those applicable)

Objectives	
O1	X
O2	X
O3	X
O4	
O5	X

Strategies			
S1		S8	
S2	X	S9	X
S3		S10	X
S4	X	S11	
S5		S12	X
S6	X	S13	
S7		S14	X

8. What are the Enterprise dependencies? (IT, Non-IT, Workforce, Within ED or External to ED, etc.)

All FSA Technical Enterprise Stakeholders are affected. Standardizing the Configuration Management Process across the enterprise helps each application by minimizing the likelihood of outages of systems that can negatively impact other systems (thus other/all stakeholders). Application Teams must also be familiar with the broader SLC as well as the Enterprise Change Management Solution that facilitates coordination of change activity across the Enterprise Data Centers.

The CM Program also depends heavily on the availability of Rational ClearCase (FSA's Standard CM Tool) to application Teams.

9. What are the total costs and savings of the initiative?

Quantified Benefit ($)	How will benefit be measured/realized?	When will benefit be realized?
Application Team Members	Average of 1 day savings due to enhanced CM knowledge and capabilities	Benefits increasingly realized in conjunction with teams' adherence to consistent use of FSA's CM Standards and practices.
FSA IT Services Staff	Average savings of 1 hour per week	Benefits increasingly realized in conjunction with FSA Managers requiring their teams' adherence to consistent use of FSA's CM Standards and practices.
Assumptions		

1. Problems averted (including root cause analysis, status updates, reporting system down time, repair time, clarity of responsibility) will yield average time savings of 3 hours each week for application team members (as they are able to avoid the usual pitfalls)
2. 13 Application Teams already participate in the CM Coaching & Review Program into practice (35 applications are in the FSA Portfolio)
3. Additionally, FSA System owners can realize 1 hour saved per change request via the streamlined process and consistent stability. With at least 2 major development activities per week and 52 weeks per year, over 100 hours can be saved annually for each FSA Project Manager (there are approximately 35 FSA Project Managers)

	FY2003	FY2004	FY2005	FY2006	FY2007	Total
Development						
Operations	$160,000					
Total	$160,000					

	FY2003	FY2004	FY2005	FY2006	FY2007	Total
Savings						

10. What is the immediate funding need?

The funding need is $160,000 for this Initiative beginning on February 15, 2003 and continuing through June 30, 2003.

11. What will be the initiative measures of success?

The purpose of this task is to realize the value of the CM capability. As such, the measures of success for this initiative are:

- FSA CM Coaching and Review Program (of all of FSA's CM Standards) extended to all Application Teams
- Application Teams' compliance with FSA's CM standards increases
- FSA Enterprise PRR Documentation Repository utilized by all application teams involved in PRR
- FSA CIO's optimal organizational alignment to Support FSA's CM Program determined
- Recommendations determined for implementing an advanced CM Capability at FSA which is fully integrated and technically enabled (for Go/No Go decisions)

12. What are the impacts of not funding this initiative?

This initiative will continue the process of CM definition and enablement consistent with FSA goals.

Insufficient Enterprise Configuration Management (CM) definition and enablement results in costly rework needed to correct major issues such as system outages or testing failures.

Not moving forward with this initiative would diminish the ability of FSA to leverage existing subject matter expertise as part of the transition of all Enterprise CM activities to FSA resources. While the FSA CM program has been effectively established, the next steps covered in this initiative are necessary for FSA's long-tern CM success.